

AMENDMENTS TO THE DRAWINGS

One replacement drawing sheet is attached. Replacement sheet 1 (labeled "2/5") corrects Figure 4 to include boldfaced characters as shown on the drawings as filed and which were unintentionally omitted in the formal drawings submitted on January 22, 2002. Applicants respectfully submit that no new matter has been added as a result of this amendment.

REMARKS

Claims 1-13 remain in the present application. Claims 1-3 and 5-12 are amended herein. Applicants respectfully assert that no new matter has been added as a result of the claim amendments. Applicants respectfully request further examination and reconsideration of the rejections based on the amendments and arguments set forth below.

Claim Rejections – 35 U.S.C. §103

Claims 1-13 are rejected under 35 U.S.C. §103(a) as being unpatentable over United States Patent Number 6,952,521 to Kelly et al. (hereafter referred to as "Kelly") in view of United States Patent Number 6,031,960 to Lane (hereafter referred to as "Lane"). Applicants have reviewed the cited references and respectfully assert that the embodiments of the present invention as recited in Claims 1-13 are not rendered obvious by Kelly in view of Lane for the following reasons.

Applicants respectfully direct the Examiner to independent Claim 1 that recites a method for performing smooth search transitions in a DVD system comprising (emphasis added):

determining a first frame rate and a second frame rate for which a frame rate transition is to be made;
calculating an instantaneous frame rate to produce a calculated instantaneous frame rate, wherein said calculated instantaneous frame rate is between said first frame rate and said second frame rate;
adjusting a timestamp of a frame based on said calculated instantaneous frame rate to produce an adjusted timestamp; and
displaying the frame according to the adjusted timestamp.

Independent Claims 5 and 10 recite limitations similar to independent Claim 1. Claims 2-4, 6-9 and 11-13 depend from their respective independent claims and recite further limitations to the claimed invention.

Applicants respectfully assert that Kelly fails to teach or suggest the limitations of “determining a first frame rate and a second frame rate for which a frame rate transition is to be made” as recited in independent Claim 1. As recited and described in the present application, a first frame rate and a second frame rate are determined, where a frame rate transition is to be made from the first frame rate to the second frame rate. The transition is carried out by calculating a plurality of instantaneous frame rates (e.g., falling between the first and second frame rates) which are then used to adjust the time stamps of video frames, thereby smoothing the transition from the first frame rate to the second frame rate.

In contrast to the claimed embodiments, Applicants respectfully assert that Kelly is silent with respect to frame rate transitions. Further, Kelly teaches away from the claimed embodiments by teaching that frame rates should not be mixed as artifacts may result (col. 16, lines 38-40).

Applicants respectfully assert that that Lane, either alone or in combination with Kelly, also fails to teach or suggest the limitations of “determining a first frame rate and a second frame rate for which a frame rate transition is to be made” as recited in independent Claim 1. In contrast to the claimed embodiments, Applicants understand Lane to teach that playback should jump from one playback speed to another instead of transition as claimed. For example, Lane teaches that playback may be either at a speed determined by “normal play” mode or a “trick play” mode (Abstract). Further, Lane fails to teach or suggest a transition between the normal and trick playback

speeds. As such, Lane teaches away from the claimed embodiments by teaching frame rate jumps instead of frame rate transitions as claimed.

The rejection states that Kelly fails to teach or suggest the limitations of “calculating an instantaneous frame rate to produce a calculated instantaneous frame rate” as recited in independent Claim 1. Applicants concur. Accordingly, Applicants respectfully assert that Kelly also fails to teach or suggest “wherein said calculated instantaneous frame rate is between said first frame rate and said second frame rate” as recited in independent Claim 1.

Applicants respectfully assert that that Lane, either alone or in combination with Kelly, also fails to teach or suggest the limitations of a “wherein said calculated instantaneous frame rate is between said first frame rate and said second frame rate” as recited in independent Claim 1. As discussed above, Lane teaches a jump from the playback speed of “normal play” to that of “trick play.” Assuming arguendo that a normal play frame rate is analogous to a first frame rate as claimed, and also assuming arguendo that a trick play frame rate is analogous to a second frame rate as claimed, Lane teaches away from the calculation of an instantaneous frame rate (e.g., between the first and second frame rates) as claimed since Lane explicitly teaches a *jump* from a normal play frame rate to a trick play frame rate.

Page 2 of the rejection states that Lane meets this limitation as “PCR, PTS, and DTS values are calculated each time a trick play command is given meaning that they are instantaneously calculated each time a trick play command is given.” However, Applicants respectfully assert that the claimed limitation recites that the instantaneous frame rate is “*between said first frame*

rate and said second frame rate.” As such, assuming arguendo that PCR, PTS and DTS values are calculated each time a trick play command is given, Lane still fails to teach or suggest a calculated instantaneous frame rate *between a first frame rate and a second frame rate as claimed.*

Applicants respectfully assert that Kelly fails to teach or suggest the limitations of “wherein the calculating further comprises determining a change in rate between said first frame rate and said second frame rate” as recited in Claim 2. Applicants respectfully assert that Kelly is silent with regard to determining a change in rate between a first frame rate and a second frame rate as claimed, and similarly recited in Claims 6 and 11.

Applicants respectfully assert that that Lane, either alone or in combination with Kelly, also fails to teach or suggest the limitations of a “wherein the calculating further comprises determining a change in rate between said first frame rate and said second frame rate” as recited in Claim 2, and similarly recited in Claims 6 and 11. In contrast to the claimed embodiments, Applicants understand the cited portion of Lane to teach the calculation of a PTS value for a current frame during a trick play operation (line 44 of column 9 through line 9 of column 10). However, Applicants respectfully assert that such a PTS calculation is not a determination of a change in frame rate as claimed given that the calculation is for a *single* frame rate (e.g., a “trick play” frame rate) (col. 9, lines 44-45). Since the calculations taught in Lane are for frames of a *single* frame rate, Lane teaches away from calculation of a change in frame rate as claimed.

For these reasons, Applicants respectfully assert that independent Claim 1 is not rendered obvious by Kelly in view of Lane, thereby overcoming the 35

U.S.C. §103(a) rejection of record. Since independent Claims 5 and 10 contain limitations similar to those discussed above with respect to independent Claim 1, independent Claims 5 and 10 also overcome the 35 U.S.C. §103(a) rejections of record. Since Claims 2-4, 6-9 and 11-13 depend from and recite further limitations to the invention claimed in their respective independent Claims, Claims 2-4, 6-9 and 11-13 also overcome the 35 U.S.C. §103(a) rejections of record. Therefore, Claims 1-13 are allowable.

CONCLUSION

Applicants respectfully assert that Claims 1-13 are in condition for allowance and Applicants earnestly solicit such action from the Examiner.

The Examiner is urged to contact Applicants' undersigned representative if the Examiner believes such action would expedite resolution of the present Application.

Please charge any additional fees or apply any credits to our PTO deposit account number: 23-0085.

Please direct all correspondence to the below-listed address:

Anthony C. Murabito
WAGNER, MURABITO & HAO, LLP
Two North Market Street
Third Floor
San Jose, CA 95113
(408) 938-9060

Respectfully submitted,

WAGNER, MURABITO & HAO, LLP

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BMF

Bryan M. Failing
Registration No. 57,974

Two North Market Street
Third Floor
San Jose, CA 95113
(408) 938-9060